[10191/789]

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of:		
	Rudi MAYER et al.	Examiner: Kenneth Tang
For:	CONTROL UNIT FOR A SYSTEM AND METHOD OF OPERATING A CONTROL UNIT	
		Art Unit: 2127
Filed:	July 17, 1998	
Serial No.:	09/118,234	

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Date 25 Aug 2005

Michelle Carniaux (Reg. No. 36,098)

APPEAL BRIEF TRANSMITTAL

SIR:

Transmitted herewith for filing in the above-identified patent application, please find an Appeal Brief pursuant to 37 C.F.R. Part 41.37.

Please charge the Appeal Brief fee of **$500.00**, and any other fees that may be required in connection with this communication to the deposit account of Kenyon & Kenyon, deposit account number 11-0600.

Applicants hereby request a four-month extension of time for submitting the Appeal Brief. The extended period for submitting the Appeal Brief expires on September 24, 2005 (the Notice of Appeal was mailed on March 21, 2005, and filed in the Patent Office on March 24, 2005, which makes the three-month date May 24, 2005). Please charge the **$1,590.00** extension fee and any other fee that may be required to Deposit Account No. 11-0600. A duplicate of this Transmittal is enclosed

Respectfully submitted,

Dated: 25 Aug 2005

By: by: Michelle Carniaux (Reg. No. 36098)
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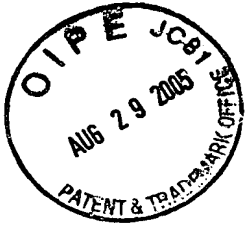

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Signature: _____
Michelle Carniaux (Reg. No. 36,098)

APPEAL BRIEF PURSUANT TO 37 C.F.R. § 47.37

S I R:

In the above-identified patent application ("the present application"), the Appellant mailed a Notice of Appeal on March 21, 2005 from the Final Office Action issued by the United States Patent and Trademark Office on September 21, 2004. This Notice of Appeal was received by the Patent Office on March 24, 2005.

In the Final Office Action, claims 1 to 14 were finally rejected. An Advisory Action was mailed on March 11, 2005.

In accordance with 37 C.F.R. § 47.37, this Appeal Brief is submitted in triplicate in support of the appeal of the final rejection of claims 1 to 14. For the reasons more fully set forth below, the final rejection of claims 1 to 14 should be reversed.

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1. REAL PARTY IN INTEREST

The real party in interest in the present appeal is Robert Bosch GmbH, Stuttgart, Federal Republic of Germany. Robert Bosch GmbH is the assignee of the entire right, title, and interest in the above-identified application.

2. RELATED APPEALS AND INTERFERENCES

There are no other appeals or interferences "which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal."

3. STATUS OF CLAIMS

Claims 1 to 7 and 9 to 14 stand finally rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 5,561,742 to Terada et al. ("Terada").

Claims 8 stands finally rejected under 35 U.S.C. § 103(a) as being obvious over Terada .

Appellants appeal from the final rejection of claims 1 to 14. A copy of the appealed claims is attached hereto in the Appendix.

4. STATUS OF AMENDMENTS

In response to the Final Office Action issued on September 21, 2004, a Response was filed on November 3, 2004. No proposed amendments to the claims were presented in the Response.

5. SUMMARY OF THE CLAIMED SUBJECT MATTER

Independent claims 1 and 10 relate to a control unit for a system having a plurality of activatable modules for generating information as a function of at least one of a plurality of states of the system, and a method of operating the control unit.

Figs. 1 and 2 show an exemplary control unit 1 for controlling a system 2 (in this instance, for example, the system 2 may be a motor vehicle, an internal combustion engine, or a transmission) having a plurality of activatable modules A, B, C and D for generating information as a function of at least one of a plurality of states X, Y and Z of the system 2. Specification at page 2, lines 18 to 26. The control unit 2 includes a first storage device for storing information relating to a mutual interference of the modules, a second storage device for storing state information regarding the modules, the state information indicating which of the modules are currently activated. Specification at page 1, line 26 to page 2, line3. In this regard, for example, the information is arranged in the form of table or

matrix, in which Column I lists the different states of the system, Column II lists the program modules which observe the corresponding states, and Column III lists the interfering modules. Specification at page 5, lines 1 to 14. As an example, the first row of the table in Figure 2 indicates that state "X" is observed by program modules "A" and "B" and is interfered with by program module "C". Specification at page 5, lines 15 to 16.

The control unit 2 further includes a scheduler 12 for activating at least one of the modules and determining as a function of the information stored in the first storage device and the state information stored in the second storage device whether the mutual interference occurs if an additional module is activated, wherein the scheduler 12 prevents a simultaneous activation of modules that interfere with each other. Specification at page 3, lines 4 to 11, and page1, lines 14 to 24.

Figure 4 shows schematically an example of the program sequence of the scheduler 12, in which a request is sent to the scheduler 12 for module A to be processed (step 101), a first storage device is polled to determine the states observed by module A (step 102), an additional storage device is polled to determine which modules are currently active and also interfere with the states observed by module A (steps 103 and 104), a decision is made as to whether module A is to be activated (i.e., if no interfering module is active and if no activated module is interfered with by the activation of module A, then the activation of module A is enabled, otherwise the activation of module A is refused) and information regarding which modules are currently activated is stored in the second storage device (steps 105 and 106). Specification at page 6, line 23 to page 7, line 16.

6. GROUNDS FOR REJECTION TO BE REVIEWED ON APPEAL

A. Whether claims 1 to 7 and 9 to 14 are anticipated by Terada.

B. Whether claim 8 is obvious over Terada.

7. ARGUMENTS

A. Claims 1 to 7 and 9 to 14 are not anticipated by Terada

Claims 1 to 7 and 9 to 14 stand finally rejected under 35 U.S.C. § 102(b) as anticipated by Terada. Appellants respectfully submit that Terada does not anticipate the present claims for the following reasons and respectfully submit that the present rejection should be reversed.

As regards the anticipation rejection of the claims, to reject a claim under 35 U.S.C. § 102, the Office must demonstrate that each and every claim feature is identically described or contained in a single prior art reference. (See Scripps Clinic & Research Foundation v. Genentech, Inc., 18 U.S.P.Q.2d 1001, 1010 (Fed. Cir. 1991)). As explained herein, it is respectfully submitted that the Final Office Action does not meet this standard, for example, as to all of the features of the claims. Still further, not only must each of the claim features be identically described, an anticipatory reference must also enable a person having ordinary skill in the art to practice the claimed subject matter, as discussed herein. (See *Akzo, N.V. v. U.S.I.T.C.*, 1 U.S.P.Q.2d 1241, 1245 (Fed. Cir. 1986)). In particular, for at least for the reasons discussed herein, the reference relied upon would not enable a person having ordinary skill in the art to practice the subject matter of the claims as presented.

Claims 1, 3 to 7, 9, 10 and 12 to 14

Claim 1 relates to a control unit for a system having a plurality of activatable modules. The recited control unit includes, *inter alia*, "a second storage device for storing state information regarding the modules, the state information indicating which of the modules are currently activated." In regards to this feature of claim 1, the Examiner relies on col. 7, lines 53 to 60 of the Terada reference. However, this section of the Terada reference does not describe state information ***indicating which of the modules are currently activated.*** Instead, this section merely describes determining current spatial regions of robots. Whether or not the robots are activated and how such information would be stored is not discussed.

The Examiner asserts otherwise and cites a section of the Terada reference purportedly relating to parameters of a robot, which states as follows:

> First, prior to the operating process, various parameters concerning the robot A are stored in the robot controller C2. More specifically, the following data are stored: an offset amount to the central position of the wrist Wa (operation command position to the robot) for determining the central position (hereinafter referred to as hand representative position) of the sphere Cha covering the wrist Wa and the hand Ha of the robot A; a radius ra1 of the sphere Cha; a radius ra2 of the sphere Cea covering the elbow joint Ja; a radius .alpha. of the section of the cylinder representing the base Sa and a distance d between two robots adjacent to each other.

(Terada; col. 6, line 60 to col. 7, line 3). Here, however, the Terada reference refers only to storage of data related to spatial relations between certain parts of the robots, and not to "state

information indicating which of the modules are currently activated," as recited in claim 1. Indeed, whether or not the robots are activated, or are even capable of being activated is not discussed. Thus, the assertions of the Examiner with respect disclosure by the Terada reference of a second storage device for storing state information indicating which modules are currently active are unsupported.

Additionally, claim 1 recites "a scheduler for activating at least one of the modules and determining as a function of the information stored in the first storage device and the state information stored in the second storage device whether the mutual interference occurs if an additional module is activated, wherein the scheduler prevents a simultaneous activation of modules that interfere with each other." In regards to these features of claim 1, the Examiner relies on col. 2, lines 42 to 53 and Fig. 5. However, this portion of the Terada reference does not discuss, or even suggest, activating a module based on state information stored in a second storage device which indicates which of the modules are currently activated, as required by claim 1. Instead, this portion merely describes that if the spatial regions cross (*i.e.*, if the robots will physically interfere with one another), one of the robots is stopped until the spatial regions no longer cross. Hence, the robot is not stopped based on state information indicating which robots are currently activated. Instead, a robot is stopped simply based on whether or not its spatial regions will cross with an adjacent robot, and not based on whether the adjacent robot is activated or not. Accordingly, for at least these reasons and the reasons discussed above, the Terada reference does not anticipate claim 1, and therefore claim 1 is allowable.

Claims 3 to 7 and 9 depend from claim 1 and are therefore allowable for at least the same reasons as claim 1.

Claim 10 relates to a method of operating a control unit of a system, and includes similar features as claim 1. Therefore, claim 10 is also allowable for at least the same reasons as claim 1.

Claims 12 to 14 depend from claim 10 and are therefore allowable for at least the same reasons as claim 10.

Claims 2 and 11

Claim 2 depends from claim 1, and claim 11 depends from claim 10, so therefore claims 2 and 11 are allowable for at least the same reasons stated above in connection with their respective base claims 1 and 10.

Additionally, claims 2 and 11 recite that the system includes one of a motor vehicle, an engine, and a transmission. The Terada reference, however, does not disclose, or even suggest, a system that includes one of a motor vehicle, an engine, and a transmission, as recited in claims 2 and 11. The Examiner asserts that these features of claims 2 and 11 are disclosed by a reference to the word "motor". (Final Office Action, page 4, sec. 4; citing Terada, col. 6, line 44). However, in this instance the Terada reference refers to "servo motor", which is different from a motor vehicle.

In response, the Examiner asserts that "motor vehicle" should be construed to mean "servo motor" because the word "vehicle" can be defined as a medium through which something is accomplished. (Final Office Action; page 6, sec. 14; citing Dictionary.com). Appellants, however, find such an interpretation illogical, particularly if one considers that such a "medium" is modified by the word "motor" (i.e., "motor medium"???). Moreover, such an interpretation of "motor vehicle" is contrary to its plain meaning and the meaning supported in the Specification. For example, Dictionary.com defines "motor vehicle" as "a self-propelled wheeled conveyance, such as a car or truck, that does not run on rails", which is consistent with the Specification. (See, for example page 3, lines 17 to 23, of the Specification, which discuss "rpm", "pedal position", and "catalyst"). Hence, the Examiner's assertions with respect to the interpretation of the phrase "motor vehicle" as meaning "servo motor" simply do not make sense and cannot be used to justify an anticipation rejection by the Terada reference. Accordingly, claims 2 and 11 are allowable for at least these further reasons.

In sum, claims 1 to 7 and 9 to 14 are allowable. Accordingly, reversal of the rejection of claims 1 to 7 and 9 to 14 under 35 U.S.C. § 102(b) is therefore respectfully requested.

B. Claim 8 is not obvious over Terada

Claim 8 stands rejected under 35 U.S.C. § 103(a) as being obvious over the Terada reference. Appellants respectfully submit that claim 8 is allowable over Terada for at least the following reasons and respectfully submit that the present rejection should be reversed.

In order for a claim to be rejected for obviousness under 35 U.S.C. § 103(a), not only must the prior art teach or suggest each element of the claim, but the prior art must also suggest combining the elements in the manner contemplated by the claim. See Northern Telecom, Inc. v. Datapoint Corp., 908 F.2d 931, 934 (Fed. Cir. 1990), cert. denied, 111 S. Ct.

296 (1990); In re Bond, 910 F.2d 831, 834 (Fed. Cir. 1990). The Examiner bears the initial burden of establishing a prima facie case of obviousness. M.P.E.P. §2142. To establish a prima facie case of obviousness, the Examiner must show, inter alia, that there is some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify or combine the references and that, when so modified or combined, the prior art teaches or suggests all of the claim limitations. M.P.E.P. §2143. Appellants respectfully submit that these criteria for obviousness are not met here.

Initially, it is submitted that since claim 8 depends from claim 1 the arguments presented above in connection with claim 1 apply equally to claim 8. Accordingly, claim 8 is allowable for at least the same reasons as claim 1.

Additionally, as admitted by the Examiner the Terada reference does not disclose a first storage device and a second storage device that both include a plurality of tables or a plurality of matrices, as recited in claim 8. Instead, the Examiner asserts that this feature is well known in the art. (Final Office Action, page 6, sec. 11). However, this type of conclusory reasoning for the modification of the applied references is insufficient to sustain an obviousness rejection. The Terada reference, which relates to robot controllers, provides no suggestion of the usefulness of modifying the methods discussed therein by including tables and/or matrices in at least two storage devices, as recited in claim 8. The only motivation to modify the reference comes from the disclosure of the Appellants, which constitutes improper hindsight reasoning. Since there is no motivation or suggestion to modify the reference, the reference does not render the subject matter of claim 8 obvious.

Reversal of the rejection of claim 8 under 35 U.S.C. § 103(a) is therefore respectfully requested.

9. CONCLUSION

In view of the above, it is respectfully requested that the rejections of claims 1 to 14 be reversed, and that these claims be allowed as presented.

Respectfully submitted,

by: Michelle Carniaux (Reg. No. 36098)

Dated: 25 Aug 2005

By: _____

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APPENDIX

1. (Previously Presented) A control unit for a system having a plurality of activatable modules for generating information as a function of at least one of a plurality of states of the system, comprising:

a first storage device for storing information relating to a mutual interference of the modules;

a second storage device for storing state information regarding the modules, the state information indicating which of the modules are currently activated; and

a scheduler for activating at least one of the modules and determining as a function of the information stored in the first storage device and the state information stored in the second storage device whether the mutual interference occurs if an additional module is activated, wherein the scheduler prevents a simultaneous activation of modules that interfere with each other.

2. (Original) The control unit according to claim 1, wherein the system includes one of a motor vehicle, an engine, and a transmission.

3. (Original) The control unit according to claim 1, wherein the scheduler prevents the simultaneous activation of modules that interfere with each other by preventing an activation of the additional module.

4. (Original) The control unit according to claim 1, wherein the scheduler prevents the simultaneous activation of modules that interfere with each other by interrupting an activated module and activating the additional module after the activated module is interrupted.

5. (Original) The control unit according to claim 1, wherein the first storage device stores information regarding which modules interfere with one another when they are simultaneously activated.

6. (Original) The control unit according to claim 1, wherein the first storage device stores information regarding which states of the system correspond to which activated modules and which states of the system are interfered with by which activated modules.

7. (Original) The control unit according to claim 1, wherein each one of the modules and the scheduler includes a program to be processed by a microprocessor.

8. (Original) The control unit according to claim 1, wherein each one of the first storage device and the second storage device includes one of a plurality of tables and a plurality of matrices.

9. (Original) The control unit according to claim 1, wherein one of a set of functions appearing to a user as one unit and another set of functions being used to control a uniform function is divided into the modules and are managed separately by the scheduler.

10. (Previously Presented) A method of operating a control unit of a system for activating at least one of a plurality of modules in order to generate information regarding at least one of a plurality of states of the system, comprising the steps of:

providing a first storage device for storing information relating to a mutual interference of the modules;

providing a second storage device storing state information regarding the modules, the state information indicating which of the modules are currently activated;

before an activation of an additional module is performed, determining as a function of the information stored in the first storage device and the state information stored in the second storage device whether the mutual interference occurs if the additional module is activated; and

preventing a simultaneous activation of modules that interfere with each other.

11. (Original) The method according to claim 10, wherein the system includes one of a motor vehicle, an engine and a transmission.

12. (Original) The method according to claim 10, wherein the step of preventing the simultaneous activation of modules that interfere with each other includes the step of preventing an activation of the additional module.

13. (Original) The method according to claim 10, wherein the step of preventing the simultaneous activation of modules that interfere with each other includes the steps of interrupting an activated module and activating the additional module after the activated module is interrupted.

14. (Original) The method according to claim 10, wherein the steps of the method are executed by a program to be processed by a microprocessor.